

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior version, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A device for automatic correction of the orientation of at least one motor-vehicle headlamp upon attitude variations ~~in the attitude~~ of the motor vehicle, including:

an emitter projecting, onto the ground in front of the vehicle, two light spots (T_1 , T_2) which are spaced apart in a direction parallel to the longitudinal axis of the vehicle,

a sensor of the illumination of the light spots (T_1 , T_2) comprising an objective forming images ~~an image~~ (I_1 , I_2) of the two light spots (T_1 , T_2) on a receiver surface and supplying an output signal (~~de_1 , de_2~~) for each one of the light spots,

processing means suitable for deriving a control signal from the output signal from the sensor, and

an actuator controlled by the control signal and able to alter ~~the~~ an elevation orientation of a reflector of the headlamp,

wherein the control signal for the actuator is derived by the processing means ~~on the basis of~~ from a linear function of the output signals (~~de_1 , de_2~~) supplied by the sensor for each image (I_1 , I_2) of each light spot (T_1 , T_2).

2. (Canceled)

3. (Previously presented) The device according to claim 1, wherein the emitter and the sensor are fixed with respect to one another.

4. (Previously presented) The device according to claim 3, wherein the emitter and the sensor are integral with a movable part of the vehicle.

5. (Previously presented) The device according to claim 4, wherein the movable part of the vehicle consists of the reflector of a headlamp of the vehicle.
6. (Previously presented) The device according to claim 3, wherein the emitter and the sensor are fixed with respect to the vehicle.
7. (Canceled)
8. (Previously presented) The device according to claim 1, wherein the light spots (T_1, T_2) define a straight-line segment substantially parallel to the longitudinal axis of the vehicle.
9. (Previously presented) The device according to claim 1, wherein the emitter and the sensor are situated substantially in the same vertical plane.
10. (Previously presented) The device according to claim 1, wherein the direction of illumination of the emitter and the optical axis of the sensor are contained in the same vertical plane parallel to the longitudinal axis of the vehicle.
11. (Previously presented) The device according to claim 1, wherein the emitter is situated on a fixed part of the vehicle, and the sensor is situated on a movable part of the vehicle.
12. (Previously presented) The device according to claim 1, wherein the emitter is situated on a movable part of the vehicle, and the sensor is situated on a fixed part of the vehicle.
13. (Currently amended) The device according to claim 1 2, wherein the linear function between the output signals from the sensor for each image of each light spot is of the form:

$$\underline{dc_1 - a \times dc_2 = K \times (\theta - \theta_0) + b},$$

wherein θ is an angle formed between an optical axis of the sensor and the ground in front of the vehicle;

wherein θ_0 is a nominal initial value of the angle θ when the elevation orientation of the reflector of the headlamp is correctly set up in inclination;

wherein dc_1 is a first of the output signals, and dc_2 is a second of the output signals;

wherein K is a magnitude representative of the vehicle's height;

wherein the a first beam corresponding to a first of the two light spots L_1 forms an angle $\theta - k_1$ with the ground in front of the vehicle,

wherein the a second beam corresponding to a second of the two light spots L_2 forms an angle $\theta - k_2$ with the ground in front of the vehicle,

$$\text{wherein } a = \frac{1 - \tan(k_1) \times \tan(k_2) + (\tan^2(\theta_0) - 1) \times \frac{\tan(k_1)}{\tan(\theta_0)}}{1 - \tan(k_1) \times \tan(k_2) + (\tan^2(\theta_0) - 1) \times \frac{\tan(k_2)}{\tan(\theta_0)}}, \text{ and}$$

$$\text{wherein } b = \frac{\tan(k_2) - \tan(k_1)}{1 - \tan(k_1) \times \tan(k_2) + (\tan^2(\theta_0) - 1) \times \frac{\tan(k_2)}{\tan(\theta_0)}}.$$

14. (New) The device according to claim 4, wherein the movable part of the vehicle includes the reflector of a headlamp of the vehicle.

15. (New) The device according to claim 1, wherein each of the output signals represents a distance of the image of the corresponding light spot from a center of the surface.